SPECIFICATION: *The following paragraphs are amended as specified in the action. Because we do not maintain the specification with USPTO paragraphs and two columns format, we apologize for accepting the corrections of informalities by asking to correct the paragraphs as follows:*

Marked paragraph 7:

[0007] There are many nuclides that have a metastable state (isomers) whose half-life goes, according to isomers, from one microsecond or less to 50 years or more. A list of main isomers is given in Table 1. In this table are listed the symbol, the abundance of the isotope, the half-life of the nuclei, and the energy of the gamma radiation emitted at the time of the deexcitation. Indium 115, for example, has a 268 minutes (4,48 hours) metastable state with the half-life shown in Figure 1. It returns to its stable fundamental state by isomeric transition while emitting a gamma radiation from 336.2 keV. The isomeric transition, like internal conversion, does not give place to a change of atomic number. In its normal state, an isomer returns in its ground state with the half-life mentioned in Table 1. ~~Certain~~ Some isomer nuclei, like Hafnium 178, or Hafnium 179, emit several gamma rays at the time of their return to the ground state. There also exist many radioactive isotopes with a metastable state, which can be used in applications of the invention.

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Marked paragraph 25:

[0025] In the case of the radioactive source, the gamma rays must be emitted in a cascade by the same nucleus to be entangled, and the energy of the gamma rays must be higher than the threshold of excitation of the selected isomer. For example, an emission in a cascade is provided by Cobalt 60, as shown in Figure 2. The entangled gamma rays must have a sufficient energy to cause a reverse isomeric transition of the irradiated isomer, i.e. to make the nuclei of the isomer pass from their ground state to their metastable state. In the case of Indium 115, for example, the necessary energy is of 1,080 keV, condition, which is met by the two gamma rays of Cobalt 60. One sees in Figure 2, that one of gamma has an energy of 1,173 keV with 99.90% chance to occur, and the other 1,332 keV with 99~~,~~.98% chance to occur. A cascade thus happens, because the two gamma are emitted with a 0.713 picosecond (10-12 second) interval on average.

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Marked paragraph 28:

[0028] FIG. **1** represents the energy levels of the Indium 115 nucleus during its excitation in a metastable state. The half-life of this state is normally 4.486 hours, the energy of the emitted gamma ray is of 336.24 keV ("Table ~~off~~ of Isotopes", CD-ROM, 8th edition, Version 1.0, Richard B. Firestone, Laurence Berkeley National Laboratory, University of California).

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Marked paragraph 29:

[0029] FIG. **2** represents the transition from the Cobalt 60 nucleus towards Nickel 60. The cascade, which has 99.9% chances to occur, emits two entangled gamma rays with 1173.237 keV and 1332.501 keV respectively ("Table ~~off~~ of Isotopes", CD-ROM, 8th edition, Version 1.0, Richard B. Firestone, Laurence Berkeley National Laboratory, University off California).

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Marked paragraph 39:

[0039] According to another mode of implementation of the invention, schematized on FIG. 6, the samples (14) are placed on a rotating tray (13). This tray is supported by an axis (15) and is connected to a motor (16), which is controlled by a timer (17). The samples are presented in a sequence in front of the beam of X-rays of a compact linear accelerator (12) for example. A "phantom" (18) filled with water stops the non-absorbed gamma rays. In general the accelerators cannot function ~~permanently~~continuously. A ~~certain~~ given number of units of time of irradiation, for example units of 5 minutes, is applied to each sample according to the desired initial half-life using a timer (19).

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